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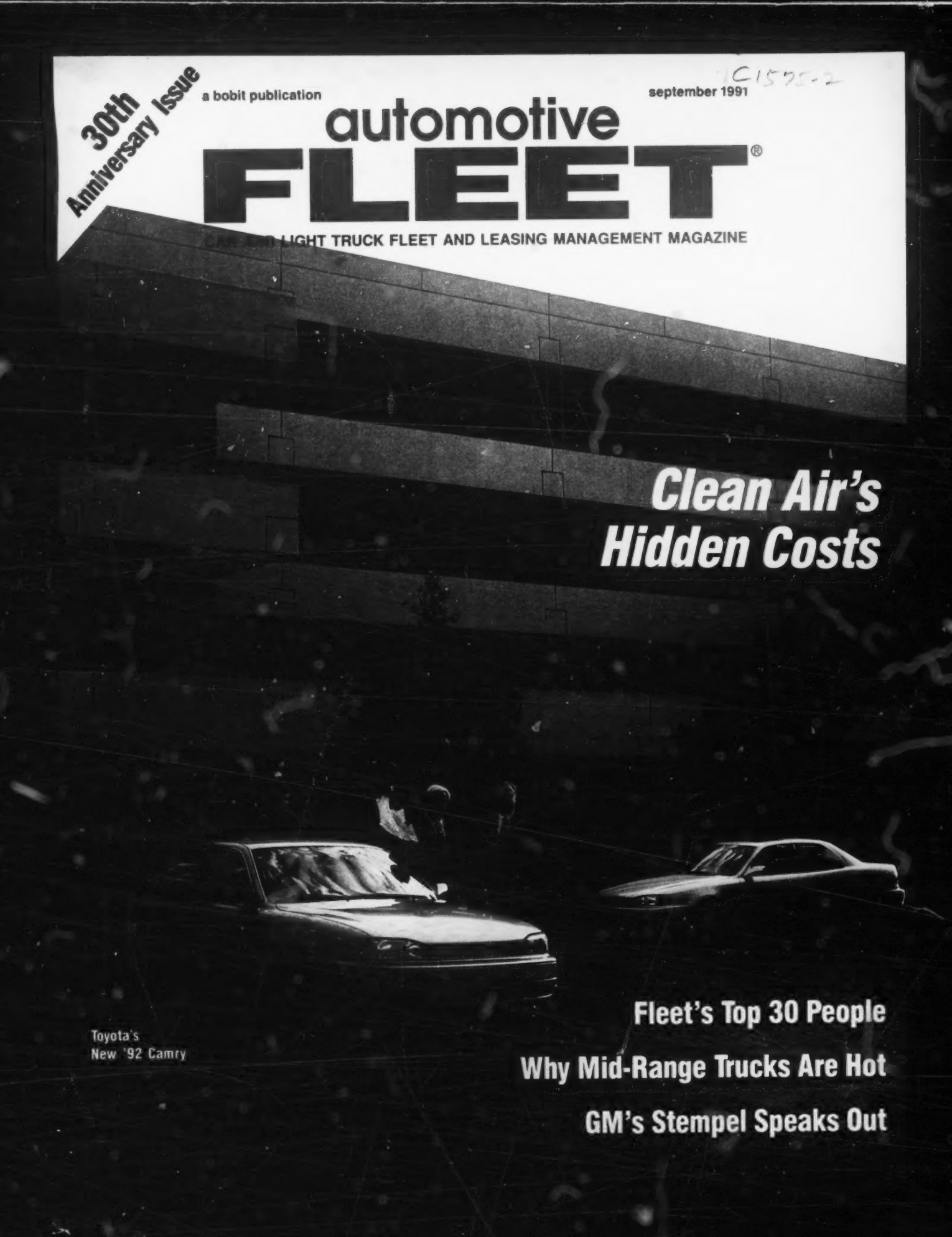
CAR AND LIGHT TRUCK FLEET AND LEASING MANAGEMENT MAGAZINE

Clean Air's Hidden Costs



Toyota's New '92 Camry

Fleet's Top 30 People

Why Mid-Range Trucks Are Hot

GM's Stempel Speaks Out

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CAR AND LIGHT TRUCK FLEET AND LEASING MANAGEMENT MAGAZINE

BOBIT PUBLISHING

September 1991
VOL. 30, NO. 9

Influencing the management of 5,072,000 cars and 2,209,000 light trucks and vans in business, leasing, rental, utility, government, police, and taxi fleets.

***Page 22**—This Econoline van has been converted by Phillips 66 to be propane-powered by installing a filter shut-off valve, new carburetor, fuel microprocessor, and two LPG tanks.*

***Page 108**—Class 4-5 trucks are gaining attention from commercial users. Pictured above is a Mitsubishi Fuso FH 100.*

***On the Cover:** Toyota Motor Sales U.S.A.'s Robert McCurry (left), executive vice president of sales and operations, and Mike Rocco, corporate fleet manager, stand next to the 1992 Camry. For more details on the new Camry, see page 66.*

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Clean Air Act Amendments Could Cost Fleets $43 Billion

Financial models analyzing the Clean Air Act show that certain centrally-fueled cost increase, but exemptions to state transportation control measures hopes to

The nationwide cost for certain fleets to convert to mandatory usage of clean-fueled vehicles could run as high as $43 billion from 1998 to 2004, depending on the type of alternate fuel used, according to a study recently compiled by *Automotive Fleet*.

As mandated by the Clean Air Act Amendments of 1990, fleets that are located in designated non-attainment areas (see page 23 for a city listing), and which are centrally fueled or capable of being centrally fueled, will have to purchase a specified percentage of low-emission vehicles beginning in model-year 1998.

The Act does not require the use of any specific alternate fuel to meet the legislated vehicle exhaust emission requirements. Any fuel can be used, so long as the specified emission standards are attained, and it appears that reformulated gasoline and clean diesel may be able to achieve these requirements with improved catalytic converter technology.However, the Bush Administration's National Energy Strategy proposal presently before Congress contains fleet provisions that would not allow the use of petroleum-based fuels.

This article will provide cost projections for operating a mixed fleet of gasoline-fueled vehicles and specific percentages of alternate-fueled vehicles powered by one of the following fuels: methanol, compressed natural gas (CNG), and ethanol. These cost projections by fuel mix (gas/methanol, gas/CNG, and gas/ethanol) will be compared against the cost of operating a gasoline only fleet. This analysis covers a seven-year period from model-years 1998-2004. (The financial and operational aspects of other fuels, such as propane, reformulated gasoline, clean diesel, and electric power, will be examined in subsequent issues.)

Estimated Nationwide Fleet Compliance Cost

Fuel Type Selected	Est. 1998-2004 Cost	Increase Compared to Gasoline
All-Gasoline Fleet	$179.2 Billion	—
Gas/Methanol Fleet Mix	$209.4 Billion	+ $30.2 Billion
Gas/CNG Fleet Mix	$212.2 Billion	+ $33.0 Billion
Gas/Ethanol Fleet Mix	$222.7 Billion	+ $43.5 Billion

The cumulative nationwide fleet cost to transition to certain alternate fuels is presented above, along with their increased expense when compared against operating a gasoline-only fleet.

Number of Vehicles Affected

In order to estimate the industry-wide cost to fleets to satisfy the Clean Air Act requirements, it was necessary to determine the approximate number of vehicles actually affected by this legislation. Based on a survey conducted by Dwights Energy Research, headquartered in Denver, CO, there are approximately 1.8 million vehicles (consisting of 585,000 cars and over 1.26 million trucks) that are centrally fueled in the 21 designated non-attainment areas. This 1.8-million-unit figure is a conservative estimate of the number of vehicles covered by the legislation, since it doesn't take into account those fleets that are *capable of being centrally fueled*. The reason these fleet vehicles were not included in this estimate was because there is presently no official definition of the term, "*capable of being centrally fueled*." The Environmental Protection Agency is presently formulating a definition and expects to present it for public comment, along with other matters, in the fall of 1991.

Nationwide Financial Impact

Based on this universe of 1.8 million vehicles, *Automotive Fleet* projected the nationwide cost of converting to either methanol, CNG, or ethanol fleets to be $30 to $43

of 1990 Plus

fleets will bear a staggering mitigate some of this expense.

billion from 1998 to 2004. These cost projections conservatively assume a zero vehicle-population growth within these affected fleets during this seven-year period.

The first phase-in year for fleets to acquire alternate-fueled vehicles will be the 1998-model year. At that time, 30 percent of all 1998-model fleet acquisitions (purchases and/or leases) of vehicles less than 26,000 lbs. in non-attainment areas will have to be alternate-fueled. Realistically, the purchase/lease of these units will commence with fleet ordering in mid-1997 for delivery in the fall of 1997. In this context, alternate-fueled vehicle compliance by affected fleets is only 70 months away.

Furthermore, in the 1999-model year, the annual acquisition rate for alternate-fueled vehicles increases to 50 percent and then to 70 percent by the 2000-model year and all years thereafter.

The preceding cost projections for operating these four fleet types were based on analyzing and quantifying 27 different fleet expense categories such as vehicle acquisition cost, book depreciation, projected resale value, maintenance, fuel, accident/repair, insurance, and tax/registration, to name a few. All cost calculations were based on a benchmark car and truck.

It is important to emphasize that we chose to err on the side of caution and all cost calculations used in this article are extremely conservative, especially our estimated engine deducts at resale of alternate-fueled vehicles.

The Letter of the Law: The Alternate Fuel Fleet Provisions

The Clean Air Act Amendments of 1990 were signed into law in November 1990 after nearly 10 years of consideration and an additional year of hot debate. The following is a summary of the alternate fuel requirements for designated fleets as mandated by the Clean Air Act Amendments of 1990.

Fuels Required

The term "clean alternative fuel" means any fuel including methanol, ethanol, reformulated gasoline, diesel, natural gas, liquefied petroleum gas, or electricity used to power a vehicle that complies with the exhaust emission standards required by the Act.

Areas Covered

There are 21 major metropolitan areas throughout the U.S. that fall under the requirements of the law. These areas are:

Atlanta,GA;
Bakersfield, CA;
Baltimore, MD;
Baton Rouge, LA;
Beaumont-Port Arthur, TX;
Boston-Lawrence, MA;
Chicago-Gary-Lake County, IL, IN, WI;
Denver-Boulder, CO;
El Paso, TX;
Fresno, CA;
Hartford, CT;
Houston-Galveston-Brazoria, TX;
Los Angeles-Anaheim-Riverside, CA;
Milwaukee-Racine, WI;
New York, NY, NJ, CT;
Philadelphia-Wilmington-Trenton, PA, MD, NJ, DE;
Providence-Pawtucket-Fall River, RI, MA;
Sacramento, CA;
San Diego, CA;
Springfield, MA;
Washington, D.C., MD, VA.

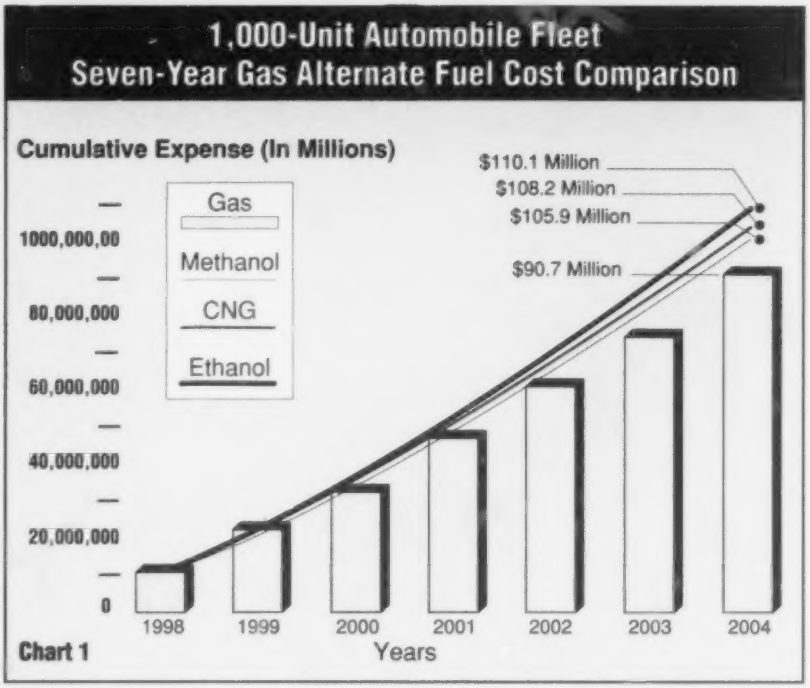
Fleets Covered by Law

All company and government fleets with 10 or more vehicles located in a designated non-attainment area are potentially covered by the legislation. Certain fleet vehicles are exempt such as rental cars, police units, and emergency vehicles. Only that portion of a covered fleet's vehicles which are centrally fueled or capable of being centrally fueled are subject to the alternate-fueled vehicle purchase mandate. The legislation covers all automobiles and trucks (26,000 lbs. or less gross vehicle weight). Vehicles garaged at a personal residence at night are not considered capable of being centrally fueled.

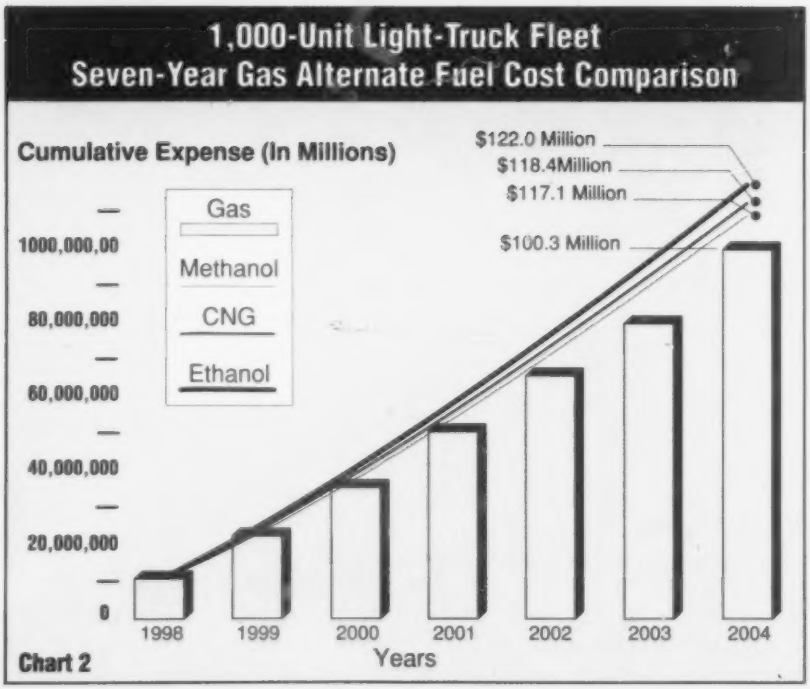
Alternate Fuel Vehicle Phase-In Period

Covered fleets are required to allocate a percentage of their new-vehicle purchases to clean fuel vehicles based upon the following timetable.

	MY 1998	MY 1999	MY 2000
Vehicles up to 8,500 lbs. GVW	30%	50%	70%
Vehicles above 8,500 lbs. GVW	50%	50%	50%



A company with a 1,000-car fleet (Chart 1) can anticipate a fleet cost increase over a comparable gasoline-powered fleet from $15.2 to $19.4 million over a seven-year period. Annually, this translates into an average cost increase of $2.2 to $2.8 million, depending on the type of fuel used. Correspondingly, a truck fleet (Chart 2) numbering 1,000 units can expect an increase ranging from $16.9 to $21.8 million from 1998 to 2004. The average annual truck expense during this period would be $2.4 to $3.1 million. By analyzing these two hypothetical 1,000-unit fleets, you can proportionately approximate your potential alternate-fuel fleet expense. For instance, if you had a 500-car fleet, your expenses would be half of that projected for the hypothetical 1,000-car fleet, and so forth for truck fleets.



Hypothetical 1,000-Unit Fleets: Alternate Fuels vs. Gasoline

Of the 1.8 million fleet vehicles potentially affected by the legislation, 32 percent are cars and 68 percent are trucks.

Since trucks are more expensive to operate than cars, this analysis postulates a hypothetical car fleet and a separate hypothetical truck fleet to project fleet compliance costs. The benchmark car model selected to represent a typical fleet-equipped sedan was the Ford Taurus L, while a Chevrolet C3500 regular cab pickup was selected as the base truck model.

Chart 1 diagrams the projected cumulative expense of a 1,000-car-only fleet of gas-powered units *mixed with alternate-fueled cars*. The percentage mixture of the alternate fuels to gas-powered cars during this time frame is based on the mandated fleet phase-in schedule. (See page 23.) In addition, the cumulative expense of the mixed fleet is compared against the cost of running 1,000 gasoline-powered cars from 1998 to 2004. Chart 2 examines the same expenses, but for a 1,000-unit truck fleet.

We want to focus your attention on the cost *difference* between alternative fuels and gasoline. In a mixed fleet of methanol- and gasoline-powered vehicles, during a seven-year period there would be an additional cost of $15,251,000 beyond what it would cost to run a comparable gasoline-only fleet. This represents an additional average annual fleet expense of $2,179,000.

Similarly, a combined CNG/gas fleet would accrue an additional $17,465,000 in expenses, while the additional cost to run a combined gasoline and ethanol fleet over a seven-year period would be $19,389,000.

Also, based over a seven-year time frame, the cost increases for a 1,000-unit truck fleet ranged from $16,891,000 for a gas/methanol mixture, to $18,163,000 for CNG/gas, and $21,790,000 for ethanol/gas. This represents an average ex-

1,000-Unit Car Fleet: Cost Difference Between Alternative Fuels and Gas

The Methanol Car Fleet:	
Additional gas/methanol fleet expense over gas at seven years:	$15,251,000
Additional average annual fleet expense increase:	$2,179,000
The CNG Car Fleet:	
Additional gas/CNG fleet expense over gas at seven years:	$17,465,000
Additional average annual fleet expense increase:	$2,495,000
The Ethanol Car Fleet:	
Additional gas/ethanol fleet expense over gas at seven years:	$19,389,000
Additional average annual fleet expense increase:	$2,770,000

1,000-Unit Truck Fleet: Cost Difference Between Alternative Fuels and Gas

The Methanol Light-Truck Fleet:	
Additional gas/methanol fleet expense over gas at seven years:	$16,891,000
Additional average annual fleet expense increase:	$2,413,000
The CNG Light-Truck Fleet:	
Additional gas/CNG fleet expense over gas at seven years:	$18,163,000
Additional average annual fleet expense increase:	$2,595,000
The Ethanol Light-Truck Fleet:	
Additional gas/ethanol fleet expense over gas at seven years:	$21,790,000
Additional average annual fleet expense increase:	$3,113,000

pense which ranges from $2.4 to $3.1 million per year.

The key factors that make alternate-fuel usage more expensive than gasoline are: vehicle acquisition cost, projected resale value, and operating expenses centering on maintenance, fuel cost, and miles-per-gallon fuel economy. Each of these expense factors are examined by alternate fuel type in Chart 5 on page 30.

Projected Resale Values For Alternate-Fuel Vehicles

Although fleets generally think of used-vehicle sales in terms of the wholesale market, the ultimate buyers of out-of-service fleet units will continue to be the retail consumer.

A critical financial aspect of the Clean Air Act is that the car-buying consumer is not required to purchase an alternate-fueled vehicle.

This raises the question about the potential resale value of these vehicles. At first examination, it appears that the resale values of alternate-fueled vehicles will be extremely low. For instance, how many people do you know that would be interested in paying $400-$1,700 more for a car whose fuel expense is 25 to 100 percent greater? Or pay 10 to 20 percent more to maintain and repair a vehicle, while getting 20 to 79 percent less fuel mileage than a comparable used car with a gas-powered engine?

If new-car buyers reject alternate-fueled vehicles, will used-car buyers similarly reject used alternate-fuel vehicles for the same reasons? Used-car preferences usually mirror new-car preferences. A used-car buyer is typically a *would-be new car buyer* who is financially forced to settle for a similar, but used, model because it costs less.

Net depreciation is already the number one expense for fleet operations and a low resale return on alternate-fueled vehicles promises to further inflate depreciation expenses.

The first two-year-old alternate-fueled fleet units will hit the used-car market as early as 2000-2001. It

Banking on Credits and Exemptions

One way to minimize the number of alternate-fueled vehicles a covered fleet would have to acquire and operate is to purchase "credits" from other fleets that have exceeded their requirements.

As part of the Clean Air Act Amendments of 1990, credits will be available to fleets that either:

1) Purchase more clean fuel vehicles than required;

2) Purchase vehicles that are less polluting than the statutory standards;

3) Purchase clean fuel vehicles that are not otherwise covered under the Clean Air Act Amendments; or

4) Purchase clean fuel vehicles prior to the mandated phase-in period.

These credits are "bankable" and can be used in future years and should the covered fleet not be able to meet its purchase mandates that year or they could be traded or sold to another covered fleet in the same area.

TCM Exemptions

This provision provides clean-fueled fleets an exemption from current and forthcoming *transportation control measures* (TCM) that are implemented by individual states as a means to control motor vehicle usage.

Examples of current TCMs are high-occupancy vehicle lanes, while an example of a proposed TCM is the possible closure of roads during particular times of the day or days of the week, as is being considered by the District of Columbia for possible implementation in 1998.

According to the Clean Air Act, the EPA Administrator will develop regulations that will exempt clean-fuel vehicles from adhering to these locally-imposed transportation control measures.

is anticipated that the future supply of used alternate-fueled vehicles with high mileage will far exceed low consumer demand. As a result, the bottom line net depreciation expense for affected fleets will become progressively worse as used-car consumers continue to prefer gasoline-powered vehicles due to their lower cost and ease of operation. As a result, used-car alternate-fueled engine deducts of $2,000 were estimated in our methanol/ethanol fleet expense projections, and the CNG engine deduct was increased to $3,000 because its fuel tank requirements sacrificed trunk space. It's important to add that these projected alternate fuel engine resale losses are extremely conservative estimates.

It is entirely conceivable, even

Chart 5: The Financial Impact of Three Alternate Fuels

Methanol Cost Factors

• **Fuel Cost:** To travel the same distance as with a gallon of gasoline, you would have to pay at least 25 cents more for methanol.

• **Fuel Economy:** The average miles-per-gallon fuel economy of a methanol-powered car is 40 percent less than a comparable gasoline-powered car.

• **Operating Expense:** It is estimated that a methanol-powered car will be 20 percent more expensive to maintain and repair since methanol is a highly corrosive fuel and is extremely hard on engine oil.

• **Acquisition Cost:** Automobile manufacturers currently predict an average additional acquisition cost of $400 per methanol-powered car over the equivalent gas-powered model specified with the same equipment.

• **Resale Value:** A $2,000 engine deduct is estimated due to anticipated low consumer demand for high mileage used alternate-fueled vehicles.

Methanol Cost Assessment: Overall, fleets can anticipate an estimated five percent cost increase over a comparable gasoline-only fleet following the initial acquisition of 30 percent methanol-powered vehicles in 1998. By 2004, fleet expense will then increase annually to 22 percent over a comparable gasoline-powered fleet with a 70 percent acquisition rate for alternate-fueled vehicles.

CNG Cost Factors

• **Fuel Cost:** To travel the same distance as with a gallon of gasoline, you would have to pay at least 50 cents more for CNG.

• **Fuel Economy:** A CNG-powered vehicle has 79 percent lower fuel economy than gasoline.

• **Other Expenses:** CNG usage requires a special, larger fuel tank which occupies most of the vehicle's trunk area. The cost of each CNG fuel tank is estimated to be more than $1,200. CNG-powered vehicle are currently limited to a 120-mile driving radius with a single fuel tank. A second fuel tank would be required for the vehicle to operate beyond a 120-mile radius.
Currently, the average cost to convert an engine from gasoline to CNG is $2,400 per vehicle.

• **Acquisition Cost:** Automobile manufacturers currently estimate the additional acquisition cost for a new CNG vehicle at $500 and up compared to a gas-powered counterpart with comparable equipment. This figure does not include the $1,200 cost for installing a special fuel tank. Altogether, the minimum initial cost of a CNG vehicle will be $1,700 or more.

• **Resale Value:** A $3,000 engine deduct since trunk space is lost to accommodate a larger fuel tank.

CNG Cost Assessment: Fleets can anticipate a 5.2 percent overall cost increase at the time of the initial 30 percent CNG phase-in in 1998. Expenses will continue to rise annually to a projected level of almost 23 percent with 70 percent CNG integration by 2004.

Ethanol Cost Factors

• **Fuel Cost:** Ethanol presently costs twice as much as gasoline.

• **Fuel Economy:** Ethanol's miles-per-gallon fuel economy averages 20 percent less than a comparable gasoline-powered car.

• **Operating Expense:** It is estimated that an ethanol-powered car would cost 10 percent more to maintain and repair than the equivalent gas-powered model. Although ethanol is less corrosive than methanol, it is still more corrosive than gasoline.

• **Acquisition Cost:** Automobile manufacturers currently predict an average minimum additional acquisition cost of $400 for an ethanol-powered car over the same comparably equipped gas-powered model.

• **Resale Value:** A $2,000 engine deduct is estimated due to anticipated low consumer demand for high mileage used alternate-fueled vehicles.

Ethanol Cost Assessment: Fleets can expect an estimated 6.4 percent cost increase using ethanol-powered vehicles by 1998. Fleet expense will then increase annually to a projected level of 28 percent with 70 percent ethanol integration by 2004.

probable, that the alternate-fueled vehicles mandated upon fleets will recover very little of their original cost at resale. This will drive net depreciation, already a fleet's largest cost, even higher than estimated in our preceding cost projections.

Operational Impact of Alternate Fuels

Another unresolved question is what indirect cost will widespread alternate fuel usage have on day-to-day fleet operations? For instance, methanol engines are difficult to start below 40 degrees Fahrenheit. How will this affect winter operations for snow-belt fleets? Methanol is toxic if swallowed or absorbed through the skin and if a methanol-fueled vehicle should catch fire, such as in an accident, the fuel burns invisibly if not mixed with gasoline. What changes will then be required in the workplace to safeguard against methanol-related mishaps.

Another operational concern is fuel availability. If there is widespread usage of ethanol by fleets, it is feared that there may be limited fuel availability because of the limited volume of grain and corn stocks that can be diverted to fuel production.

Clean Air Act May Encourage Employee Reimbursement

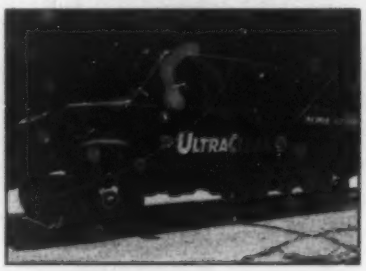
The passage of the Clean Air Act Amendments of 1990 does not mean that all fleets must convert to alternate-fueled vehicles. By following the letter of the law, fleets can choose among several approaches to comply with the legislation, while avoiding the high costs of operating alternate-fueled vehicles. Reimbursement programs for employee-owned vehicles may become an attractive alternative to fleets facing dramatic cost increases due to the clean air legislation.

All fleets with 10 or more vehicles fall under the provisions of the Clean Air Act Amendments of 1990. Companies may find it more cost effective to set up driver-reimbursement programs, where employees use their own vehicles for business purposes and are provided an allowance by the company for vehicle-related expenses. An alternative approach might be for a company to assist employees finance vehicles (even trucks with complex equipment) to be used for business purposes.

Both of these approaches would release the company from the alternate-fuel vehicle requirements of the clean air legislation. This may be an unintended consequence of the Clean Air Act Amendments of 1990.

The Cost to Retrofit an Econoline to Run on Propane

Voluntary conversions of vehicles to alternate fuels may be used to meet the acquisition phase-in mandates, however, fleets covered by this legislation are not required to convert existing or new vehicles, or to purchase converted vehicles to meet the phase-in requirements.



But if you did want to convert vehicles to meet the phase-in requirements, here's what it would cost to convert a gas-powered van to also run on a clean fuel such as propane.

Recently, Phillips 66 Propane Co. converted a 1991 Ford Econoline van with a 460-cubic-inch engine to run on propane or gasoline at the company's Transportation Center in Bartlesville, OK.

The conversion required the installation of five major components: two large propane fuel tanks manufactured by Manchester Tank Company, a filter shut-off valve, a converter, a carburetor from Impco, and a fuel microprocessor. Conversion cost was close to $2,000.

Propane conversion systems require the addition of and adjustment to the following (approximate retail costs are listed in parenthesis):

• **Fuel Handling System**: This includes one or more heavy-steel tanks to hold propane and keep its liquefied under pressure ($300-$500).

• **Fuel Injection System**: This includes a filtered fuel lock or shut-off valve to stop fuel flow when the engine stops; a convertor or vaporizer/regulator to regulate fuel pressure, which vaporizes propane, and meters it into the carburetor; and the carburetor itself ($300-$400).

• **LPG Fuel Microprocessor**: Monitors fuel flow to the engine and adjusts the air-to-fuel ratio 10 times a second for optimum engine performance ($300-$400).

Labor costs for installation can run up to $500 and are affected by whether converted vehicles will be dual-fuel or propane-only; age and condition of the vehicles; and number of vehicles to be converted. Miscellaneous costs for lines, fittings, connectors, and valves cost approximately $200.

The fleet cost for converting vehicles to operate on propane is also dependent on the size, number, and location of fuel tanks installed in each vehicle and the number of total vehicles converted, says Warren Carey, vice president of Phillips 66 Propane Company.

Carey said Phillips 66 expects to completely recoup conversion costs for the van within the first 50,000 miles. The company expects the van to easily exceed that mileage because of the clean-burning propane won't create maintenance problems by fouling the engine.

Midyear Car Registrations

Fleet registrations for the first six months of the 1991-model year have increased 25 percent over 1990.

MODEL	1990 Model Year Total	1990 1st 6 Mos MYTD	1991 1st 6 Mos MYTD
SUBCOMPACT			
323	2,506	1,750	3,213
Capri	330	—	118
Cavalier	60,739	32,368	42,757
Colt/Summit/Vista	1,827	114	1,017
Escort/Festiva	55,524	30,386	45,964
Excel	262	214	326
Golf/GTI/Fox	2,846	433	781
Horizon	3,745	3,167	83
Jetta	3,468	1,290	1,917
LeMans	14,490	2,534	7,577
Loyale	4,189	1,114	462
Metro	24,272	13,548	18,524
Omni	4,052	3,582	91
Precis/Mirage	13,948	10,959	10,719
Prizm	57,763	26,059	22,541
Sentra	18,925	16,044	7,491
Skyhawk	88	3	—
Sunbird	43,046	24,442	29,936
Tercel	11,813	6,575	7,144
Tracer	5,303	774	9,420
Total Subcompact	329,136	175,356	210,081
COMPACT			
240 SX	6,636	—	2,721
Acclaim	35,784	21,719	43,486
Aries	681	187	—
Conquest	—	2	—
Corolla	52,548	27,574	26,343
Corsica	66,037	26,725	37,297
Cutlass Calais	39,073	13,339	20,383
Eclipse/Cordia	2,333	554	1,411
Grand Am	61,915	31,693	35,799
Lancer	—	10	—
Legacy	11,128	4,458	7,739
Protege	2,875	2,457	4,052
Reliant	552	136	—
Shadow	26,588	21,524	11,009
Skylark	33,450	16,611	19,086
Sonata	134	92	1,045
Spirit	33,606	21,260	36,306
Stanza	14,986	5,275	6,247
Sundance	19,668	16,017	6,659
Tempo	85,571	48,469	61,597
Topaz	19,675	11,813	11,359
Total Compact	513,240	269,915	332,539
INTERMEDIATE			
626	4,175	2,742	4,928
6000	19,882	12,586	9,031
Camry	42,985	25,133	21,743
Celebrity	16,146	4,686	414
Century	31,293	18,004	18,671
Cutlass Ciera	31,100	19,850	15,416
Dynasty/Monaco	52,871	31,587	54,513
Galant	9,964	4,029	2,384
LeBaron	8,678	83	2,020
LeBaron Coupe/Convertible	18,711	8,686	9,738
Lumina	82,698	45,433	40,098
Maxima	20,227	9,701	9,915
MX-6	1,397	999	1,130
New Yorker Landau/Salon	14,432	3,554	3,109
Passat	—	172	1,320
Premier	2,620	453	630
Sable	30,450	18,157	19,249
Sigma	204	151	—
Taurus	130,101	70,794	91,496
Thunderbird	21,275	—	22,780
Volvo 244	—	1,246	—
Volvo 245	—	182	—
Volvo 744	—	299	—
Total Intermediate	539,209	278,527	328,585
STANDARD			
Bonneville	16,050	8,491	10,243
Caprice	53,570	23,107	24,564
Crown Victoria	48,161	16,982	32,502
Eighty Eight	12,455	5,880	11,571
Fifth Avenue	10,237	4,594	9,895
Grand Marquis	15,701	7,470	6,383
LeSabre	15,734	5,965	12,206
Total Standard	171,908	72,489	107,364
LUXURY			
929	2,158	980	1,353
98 Regency	9,615	3,082	3,511
Allante	480	61	108
Brougham	3,551	2,946	2,634
Chrysler TC by Maserati	350	12	61
Continental	26,007	13,412	105,494
Corvette	2,324	300	1,286
Cressida	1,183	764	479
DeVille/Fleetwood	50,631	26,788	34,523
Eldorado	3,623	1,108	1,696
Electra	—	6,136	—
Imperial	1,768	1,279	3,408
Lexus (all models)	10,922	4,780	5,250
Mark VII	6,071	2,242	1,241
Riviera	1,491	234	1,311
Scorpio/XR4Ti	—	129	—
Seville	19,218	7,074	8,027
Toronado	1,840	824	1,008
Town Car	62,959	25,362	39,993
Total Luxury	204,191	97,513	211,383
SPORTS/SPECIALTY			
240 SX	6,636	3,319	2,721
300 ZX	5,630	2,604	1,762
Beretta	9,139	7,538	4,172
Cabriolet	627	371	178
Camaro	2,726	531	1,748
Celica	7,339	3,646	2,742
Corrado	—	161	479
Cougar	9,523	7,047	8,386
Cutlass Supreme	25,759	12,736	20,506
Daytona	2,306	939	585
Firebird	1,622	224	1,060
Grand Prix	26,762	11,907	18,279
Laser/Talon	3,333	503	2,427
Miata	2,306	1,089	1,138
MR2	1,022	171	540
Mustang	17,985	10,545	18,636
Probe	23,587	9,151	9,292
Pulsar NX	407	235	14
Reatta	2,626	1,757	479
Regal	9,859	2,045	15,124
RX-7	991	432	345
Scoupe	—	—	27
Stealth	—	—	375
Storm/Spectrum	1,957	430	1,542
Supra	875	587	213
Total Sports Specialty	163,017	77,968	112,770
Total Fleet	1,920,701	971,768	1,302,722

Midyear Truck Registrations

This chart lists fleet registration figures for the first six months of the 1991-model year for trucks, sport/utility vehicles and vans. Registration figures for the first six months of the 1990-model year are listed for comparison.

Manufacturer Model	1990 1st 6 mo MYTD	1991 1st 6 mo MYTD
CLASS 1-3		
American Isuzu Pickups	3,090	1,808
Chevrolet/GMC		
S-10/S-15	N/A	7,058
C/K1500	N/A	17,684
C/K2500	N/A	7,797
C/K3500	N/A	4,703
Dodge/Jeep		
Ram 50/D-Series	N/A	5,235
Dakota	N/A	3,105
Comanche	N/A	124
Ford Ranger	9,625	9,655
Ford F-Series	31,121	34,371
Isuzu Truck NPR/W4*	1,795	1,757
Mazda B2200/B2600	1,464	1,672
Mitsubishi Pickups	47*	31*
Mitsubishi Fuso	N/A	N/A
Nissan Pickups	4,328	4,044
UD Trucks	N/A	N/A
Toyota Pickups	4,931	3,865
Total Class 1-3	**56,401**[1]	**102,909**
CLASS 4-5		
Hino All Class 4-5 models	N/A	N/A
Isuzu Truck NRR/W5*	312	404
Mitsubishi Fuso		
All Class 4-5 Models	N/A	N/A
UD Trucks All Models	N/A	N/A
Total Class 4-5	**312**[1]	**404**
SPORT/UTILITY		
American Isuzu Rodeo	N/A	41
American IsuzuTrooper	518	156
Chevrolet/GMC		
Blazer/Jimmy Models	N/A	11,293
Dodge/Jeep		
Ramcharger	N/A	422
Jeep XJ/Cherokee/XJ Wagon	N/A	5,311
Jeep CJ/Wrangler	N/A	986
Ford Bronco	2,028	4,492
Ford Explorer	15,414	3,811
Mitsubishi Montero	17*	17*
Nissan Pathfinder	1,616	2,496
Toyota 4Runner	3,699	1,877
Toyota Landcruiser	141	267
Total Sport/Utility	**23,433**[1]	**31,128**
VANS		
American Isuzu		
Chevrolet/GMC		
Lumina APV	N/A	10,218
Astro/Safari	N/A	16,823
G-Series Vans	N/A	8,247
Dodge Caravan/Voyager	N/A	29,862
Dodge B/PB Series	N/A	7,872
Ford Aerostar	27,900	20,080
Ford Econoline	21,583	27,920
Mazda MPV	2,416	3,053
MitsubishiVans (passenger & cargo)	32*	N/A*
Toyota Previa	247	2,447
Volkswagen Vanagon	N/A	120
Total Vans	**52,178**[1]	**126,642**

[1] Registration figures for some manufacturer models not available. Total is not industry wide.
* W4 and W5 are Chevy/GMC badged vehicles.
* Mitsubishi numbers based on sales figures.

USED-CAR PRICES

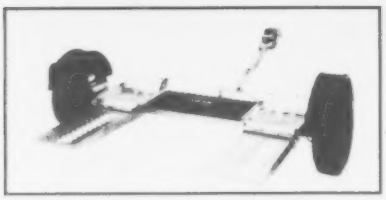
The following are average used-car prices for the period ending August 10,1991. Prices are based on wholesale activity at major dealers across the country. They are divided into three zones as indicated on the accompanying map. These averages are calculated electronically. They are based on clean cars only. Proper allowance should be made for upgrading sharp cars and proper deduction taken for fair cars. Automatic transmissions have been included in the averages of all models. This information is published in *Automotive Fleet* by special permission of *Automotive Market Report*.

Model	AVERAGE AUCTION PRICE Zone 1	Zone 2	Zone 3
89 BUICK SKYHAWK			
Coupe	5,623	5,678	5,506
Sedan	5,700	5,758	5,566
88 BUICK SKYHAWK			
Coupe	4,557	4,606	4,466
Sedan	4,622	4,668	4,530
90 BUICK SKYLARK			
Cust Sedan	7,810	7,887	7,655
89 BUICK SKYLARK			
Cust Sedan	6,589	6,656	6,459
90 BUICK CENTURY			
Cust Sedan	8,394	8,477	8,224
89 BUICK CENTURY			
Cust Sedan	6,579	6,645	6,447
90 BUICK LESABRE			
Cust Sedan	10,775	10,884	10,562
89 BUICK LESABRE			
Cust Sedan	8,394	8,476	8,223
90 CADILLAC DEVILLE			
Coupe	17,598	17,772	17,246
Sedan	17,775	17,955	17,421
89 CADILLAC DEVILLE			
Coupe	14,646	14,791	14,355
Sedan	14,806	14,957	14,511
90 CADILLAC SEVILLE			
Sedan	18,101	18,281	17,738
89 CADILLAC SEVILLE			
Sedan	14,955	15,105	14,655
90 CHEVY BERETTA			
Coupe	7,838	7,917	7,681
89 CHEVY BERETTA			
Coupe	6,621	6,688	6,487
90 CHEVY CORSICA			
Hatchback 5 Dr.	7,539	7,617	7,391
89 CHEVY CORSICA			
Hatchback 4 Dr	6,221	6,284	6,096
90 CHEVY CAVALIER			
Sedan	6,346	6,412	6,221
89 CHEVY CAVALIER			
Sedan	5,188	5,239	5,084
89 CHEVY CELEBRITY			
Sedan	5,964	6,024	5,843
88 CHEVY CELEBRITY			
Sedan	4,751	4,799	4,656
90 CHEVY CAPRICE			
Sedan	8,519	8,605	8,350
89 CHEVY CAPRICE			
Sedan	6,684	6,753	6,550
90 CHRYSLER LE BARON			
Sedan	9,507	9,602	9,318
89 CHRYSLER LE BARON			
Highline Sedan	6,373	6,435	6,241
90 CHRYSLER NEW YORKER			
Salon Sedan	11,277	11,391	11,053
89 CHRYSLER NEW YORKER			
Sedan	9,631	9,725	9,438
89 CHRYSLER FIFTH AVENUE			
Sedan	9,733	9,824	9,534
88 CHRYSLER FIFTH AVENUE			
Sedan	7,559	7,634	7,407
89 DODGE ARIES AMERICA			
Sedan	4,739	4,785	4,642
88 DODGE ARIES AMERICA			
Sedan	3,714	3,751	3,640
90 DODGE SHADOW			
Liftbk 5 Dr	6,501	6,568	6,374
89 DODGE SHADOW			
Liftbk 5 Dr	5,347	5,398	5,242
90 DODGE DYNASTY			
Sedan	8,684	8,772	8,512

Model	AVERAGE AUCTION PRICE Zone 1	Zone 2	Zone 3
90 FORD ESCORT			
Htchbk 4 Dr LX	5,631	5,689	5,518
89 FORD ESCORT			
Htchbk 4 Dr LX	4,479	4,523	4,390
90 FORD MUSTANG			
LX-4 Coupe	7,455	7,532	7,308
90 FORD TEMPO			
GL Sedan 4 Dr	6,640	6,708	6,506
89 FORD TEMPO			
GL Sedan 4 Dr	5,302	5,356	5,195
90 FORD TAURUS			
GL Sedan 4 Dr	9,195	9,288	9,013
89 FORD TAURUS			
GL Sedan 4 Dr	6,914	6,984	6,772
90 FORD CROWN VICTORIA			
Sedan	10,704	10,812	10,489
89 FORD CROWN VICTORIA			
Sedan	8,771	8,858	8,597
90 THUNDERBIRD			
Coupe	9,631	9,726	9,438
89 THUNDERBIRD			
Coupe	8,128	8,209	7,966
90 LINCOLN			
Town Car Sedan	18,000	18,179	17,641
Mark VII LSC Coupe	17,109	17,279	16,766
Continental Sedan	16,461	16,626	16,131
89 LINCOLN			
Town Car Sedan	13,309	13,444	13,043
Mark VII LSC Coupe	14,273	14,416	13,990
Continental Sedan	14,206	14,349	13,923
90 MAZDA 626			
LX Sedan 4 Dr	10,229	10,331	10,127
90 MERCURY COUGAR			
LS Coupe	10,254	10,355	10,045
89 MERCURY COUGAR			
LS Coupe	8,694	8,780	8,520
90 MERCURY TOPAZ			
GS Sedan 4 Dr	6,801	6,871	6,669
89 MERCURY TOPAZ			
GS Sedan 4 Dr	5,444	5,498	5,336
90 MERCURY SABLE			
GS Sedan 4 Dr	9,284	9,375	9,096
89 MERCURY SABLE			
GS Sedan 4 Dr	6,968	7,037	6,826
90 MERCURY GRAND MARQUIS			
GS Sedan	11,158	11,269	10,937
89 MERCURY GRAND MARQUIS			
GS Sedan	9,306	9,400	9,121
90 MITSUBISHI MIRAGE			
Sedan 4 Dr	6,240	6,302	6,178
89 MITSUBISHI MIRAGE			
Sedan 4 Dr	4,720	4,767	4,674
90 NISSAN MAXIMA			
SE Sedan	14,622	14,769	14,473
89 NISSAN MAXIMA			
SE Sedan	12,302	12,425	12,177
90 NISSAN SENTRA			
Sedan 2 Dr	5,565	5,620	5,508
89 NISSAN SENTRA			
Sedan 2 Dr	4,262	4,303	4,218
90 NISSAN STANZA			
XE Sedan	9,153	9,243	9,061
89 NISSAN STANZA			
E Ntch 4 Dr	7,222	7,293	7,148
90 OLDS CIERA			
Coupe	8,460	8,545	8,290
Sedan	8,103	8,186	7,942
89 OLDS CIERA			
Coupe	6,505	6,572	6,376
Sedan	6,579	6,645	6,447

Model	AVERAGE AUCTION PRICE Zone 1	Zone 2	Zone 3
90 OLDS CALAIS			
Sedan	6,942	7,011	6,804
89 OLDS CALAIS			
Sedan	6,040	6,100	5,920
90 OLDS CUTLASS SUPREME			
Coupe	9,370	9,463	9,182
89 OLDS CUTLASS SUPREME			
Coupe	7,507	7,585	7,359
90 OLDS 98 REGENCY			
Sedan	13,530	13,667	13,260
89 OLDS 98 REGENCY			
Sedan	10,387	10,491	10,177
89 PLYMOUTH RELIANT			
Sedan	4,714	4,762	4,622
88 PLYMOUTH RELIANT			
Sedan	3,714	3,750	3,642
90 PLYMOUTH SUNDANCE			
Liftbk 4 Dr	6,482	6,548	6,355
89 PLYMOUTH SUNDANCE			
Liftbk 4 Dr	5,347	5,398	5,242
89 PLYMOUTH GRAN FURY			
Salon Sedan	4,898	4,949	4,802
88 PLYMOUTH GRAN FURY			
Salon Sedan	3,868	3,907	3,795
90 ACCLAIM			
Sedan	7,359	7,433	7,212
90 PONTIAC SUNBIRD			
LE Sedan	6,640	6,704	6,504
SE 5Coupe	6,860	6,929	6,720
89 PONTIAC SUNBIRD			
LE Sedan	5,525	5,580	5,414
SE Coupe	5,673	5,730	5,561
90 PONTIAC 6000			
LE Sedan	8,317	8,402	8,148
89 PONTIAC 6000			
Sedan	6,193	6,252	6,068
90 PONTIAC GRAND AM			
LE Sedan	7,778	7,867	7,633
89 PONTIAC GRAND AM			
LE Sedan	6,490	6,556	6,362
90 PONTIAC BONNEVILLE			
LE Sedan	10,843	10,950	10,628
89 PONTIAC BONNEVILLE			
LE Sedan	8,314	8,396	8,149
90 PONTIAC GRAND PRIX			
Coupe	9,497	9,591	9,305
89 PONTIAC GRAND PRIX			
Coupe	7,622	7,698	7,468
90 SUBARU LEGACY			
Sedan 4 Dr Deluxe	8,428	8,509	8,341
90 TOYOTA CAMRY			
Sedan 4 Dr Deluxe	9,820	9,919	9,723
89 TOYOTA CAMRY			
Sedan 4 Dr Deluxe	8,081	8,161	8,001
90 TOYOTA COROLLA			
Sedan 4 Dr Deluxe	7,481	7,556	7,408
89 TOYOTA COROLLA			
Sedan 4 Dr Deluxe	6,287	6,349	6,224
90 TOYOTA CRESSIDA			
Lux Sedan	15,598	15,754	15,443
89 TOYOTA CRESSIDA			
Lux Sedan	12,898	13,028	12,769
90 VOLKSWAGEN JETTA			
Sedan 4 Dr	8,332	8,416	8,247
89 VOLKSWAGEN JETTA			
Sedan 4 Dr	6,890	6,960	6,821
90 VOLVO			
240 DL Sedan	12,942	13,072	12,815
89 VOLVO			
240 DL Sedan	10,896	11,005	10,787

PRODUCTS/SERVICES



a built-in suspension to minimize bouncing. The dolly bed tilts and locks into place when loading. A swivel bed platform pivots on polyethylene pads for smooth cornering. *Automatic Equipment Mfg. Co.*

Circle 213 on Inquiry Card

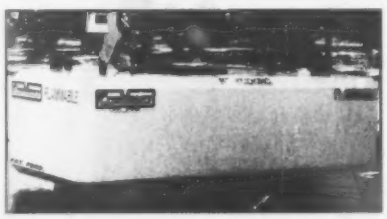
MOLDING & STRIPE REMOVAL KIT removes molding adhesive, decals, graphics, double-faced tape, and stripping tape from body panels without damaging the finish. The kit by Mac Tools includes a geared drill/die grinder, 3M Scotch-Brite disc, and roloc holder. *Mac Tools, Inc.*

Circle 214 on Inquiry Card

REPAIR MANUAL offers full coverage of 1991 domestic cars in two comprehensive volumes: Chrysler/Ford and General Motors. The Mitchell 1991 Annual Data manual includes service and repair procedures for air bags, engine performance, electrical wiring, clutches, drive axles, steering, wheel alignment, brakes, suspensions, as well as transmissions. *Mitchell International.*

Circle 215 on Inquiry Card

ABOVE GROUND FUEL TANK is a precast unit with sizes available up to 2,000 gallons. The Convault tank by Associated Concrete Products eliminates costly monitoring equipment, allowing visual inspection for leaks. *Associated Concrete Products.*



Circle 216 on Inquiry Card

AN AFTERMARKET OIL FILTER has a raised handle across the closed end for easy removal. Torque is applied perpendicular to the handle of the Sure Grip Filter and can be removed even with soiled hands. *Sure Grip Filter.*

Circle 217 on Inquiry Card

CLASSIFIED

V.P., VEHICLE LEASING, SALES & MARKETING

Midsize vehicle fleet management and leasing company seeks person with vehicle leasing industry experience to manage all sales and marketing activities. Compensation open. Send complete resume with compensation history to: **President, Fleetmark, Inc. 6060 Poplar Ave., Suite 442, Memphis, TN 38119-3902.** No phone calls.

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For information, or to place your classified ad today, call Maria Angell

(213) 376-8788

GAS PRICES

UNLEADED GAS
Cost Per Gallon

City	Full-Serve	Self-Serve
Juneau, AK	175.9¢	152.9¢
Birmingham, AL	129.9	106.9
Tucson, AZ	125.1	95.2
Inglewood, CA	149.9	98.9
Washington, D.C.	150.9	112.6
Maui, HI	203.9	152.6
Chicago, IL	164.1	126.7
Louisville, KY	136.9	108.6
Worchester, MA	136.9	122.9
Minneapolis, MN	162.0	120.0
Billings, MT	140.2	115.9
Asheville, NC	165.9	114.2
Niagara Falls, NY	130.9	122.9
Oil City, PA	115.4	107.4

The average U.S. full-serve gasoline price for the month of August was 137.9 cents per gallon.
The average U.S. self-serve gasoline price for the month of August was 115.7 cents per gallon.
Survey conducted during the first five working days of August 1991.
Data supplied by Runzheimer International, Runzheimer Park, Rochester, WI.

I would I could stand on a busy corner, hat in hand, and beg people to throw me all their wasted hours.

—Bernard Berenson

Ordinary people merely think how they shall spend their time; a man of talent tries to use it.

—Arthur Schopenhauer

What can be done at any time is never done at all.

—English proverb

Time Is Of The Essence

A car and a salesperson just go together. In the corporate world the two are virtually inseparable. Salespeople and their vehicles are like Ray Charles and his piano, Arnie Palmer and a golf club, or a coach with a cigar; they might even be called the "odd couple."

So it is always an important time when intelligent executive management takes stock of the fleet budget. In this period of lingering economic recession, management must look to either cut expense or to increase revenue. After cutting staff, offering early retirement plans, restricted use of the fax and Xerox machines and close outs of the club memberships, the corporate steering committee turns to sales. Increased sales, while holding costs, can solve many of the current financial problems; it's management 101.

Why is the vehicle that important? The adjoining chart spells it out in clear language. Corporate America's sales and tech service fleet is out in the trenches with our best known sales tool: the vehicle. These drivers cost the company over $200 for every call that is made, on average. These drivers are spending 20 percent of their working hours getting to or going from productive calls. They are racking up more than 27,000 miles each year in the sales tool provided to them. Cahner's Research's latest per call cost figure is now $259; and Dartnell researched the business-time chart. It's solid documentation.

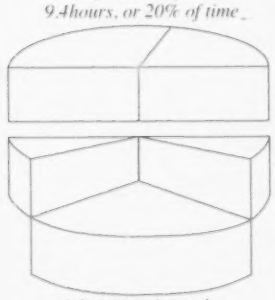
So, why a bouquet for the fleet manager? The fundamental beginning of any corporate relationship is between the sales or service manager and the salesperson; except that we must add the fleet manager to that equation at a similar level because of the "sales tool" (the vehicle). Who is the liaison with the driver on his most important sales tool that permits him or her to get from home to the office, to the call, to anywhere that the company deems necessary? Who prudently selects the proper vehicle and options? Who makes safety (and exposed employee liability or lost work time) a top ingredient in the selection? Who makes certain that the driver operates the sales tool with the least downtime for maximum productivity? Who determines the most efficient policies to maintain and ultimately gain the best resale value after the car is turned in? The fleet manager is a hybrid of Father Christmas and Ebenezer Scrooge to the drivers and operates as the CFO of the collective fleet within the company.

The financial aspects of running the vehicle fleet are enormous and significant disparities exist between the effectiveness of individual company fleet managers. Executive management needs to recognize the significant role the fleet manager plays in a corporate structure. The fleet manager function equates with that of the other senior managers inside the company. If it doesn't, the company's not getting its money's worth. It's *time* to evaluate!

ED BOBIT

How Salespeople Spend Their Time

Breakdown of an average 47-hour workweek


Selling face-to-face:
14.1 hours, or 30% of time
Selling over the phone:
9.4hours, or 20% of time
Administrative tasks:
6.6 hours, or 14% of time
Service calls:
6.1 hours, or 13% of time
Waiting/traveling:
10.8 hours, or 23% of time

Source: "Twenty-sixth Survey of Sales Force Compensation," a survey of U.S. companies, nearly three quarters of which had sales less than $50 million. The Dartnell Corp. Chicago, IL, 1990